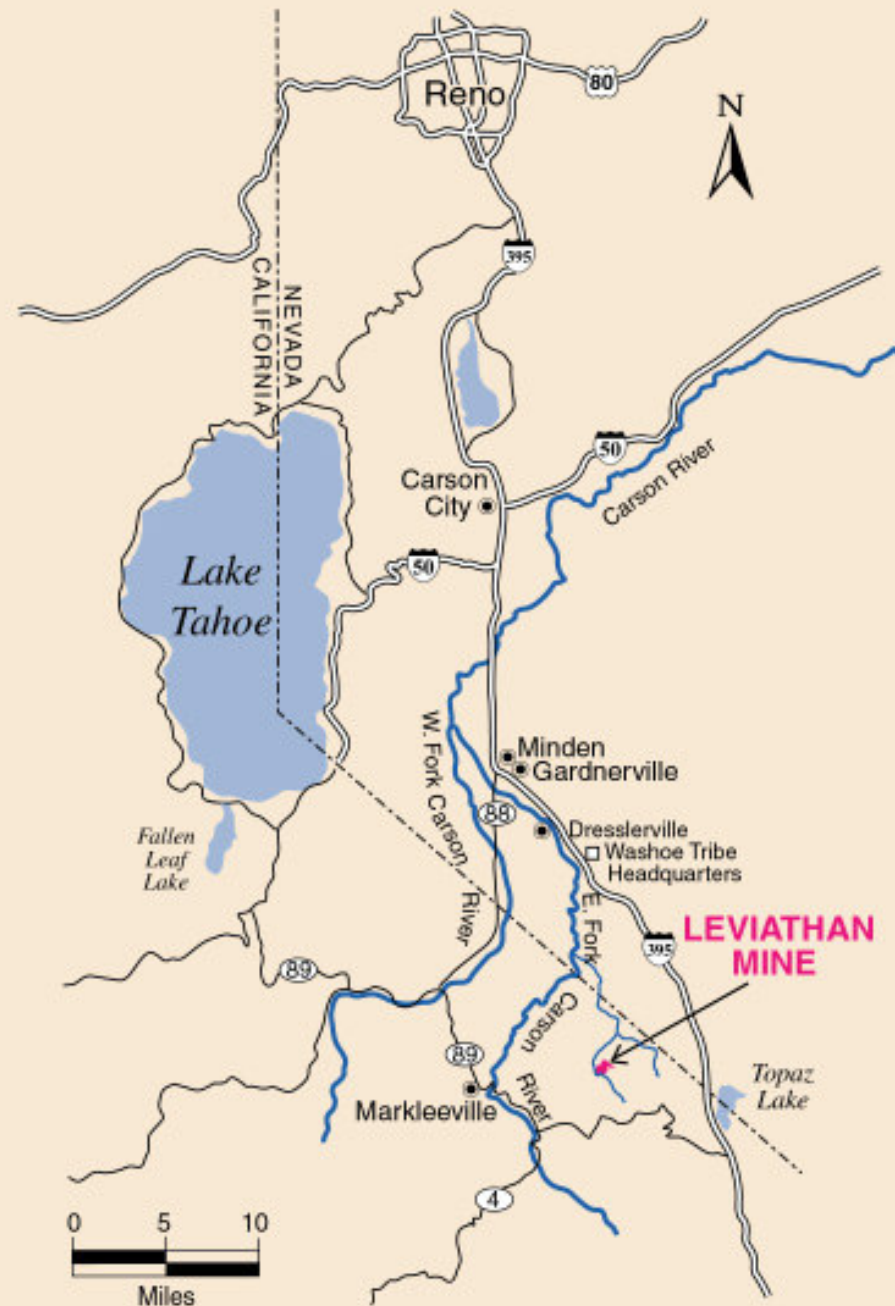


## Leviathan Mine Pit, Circa 1955







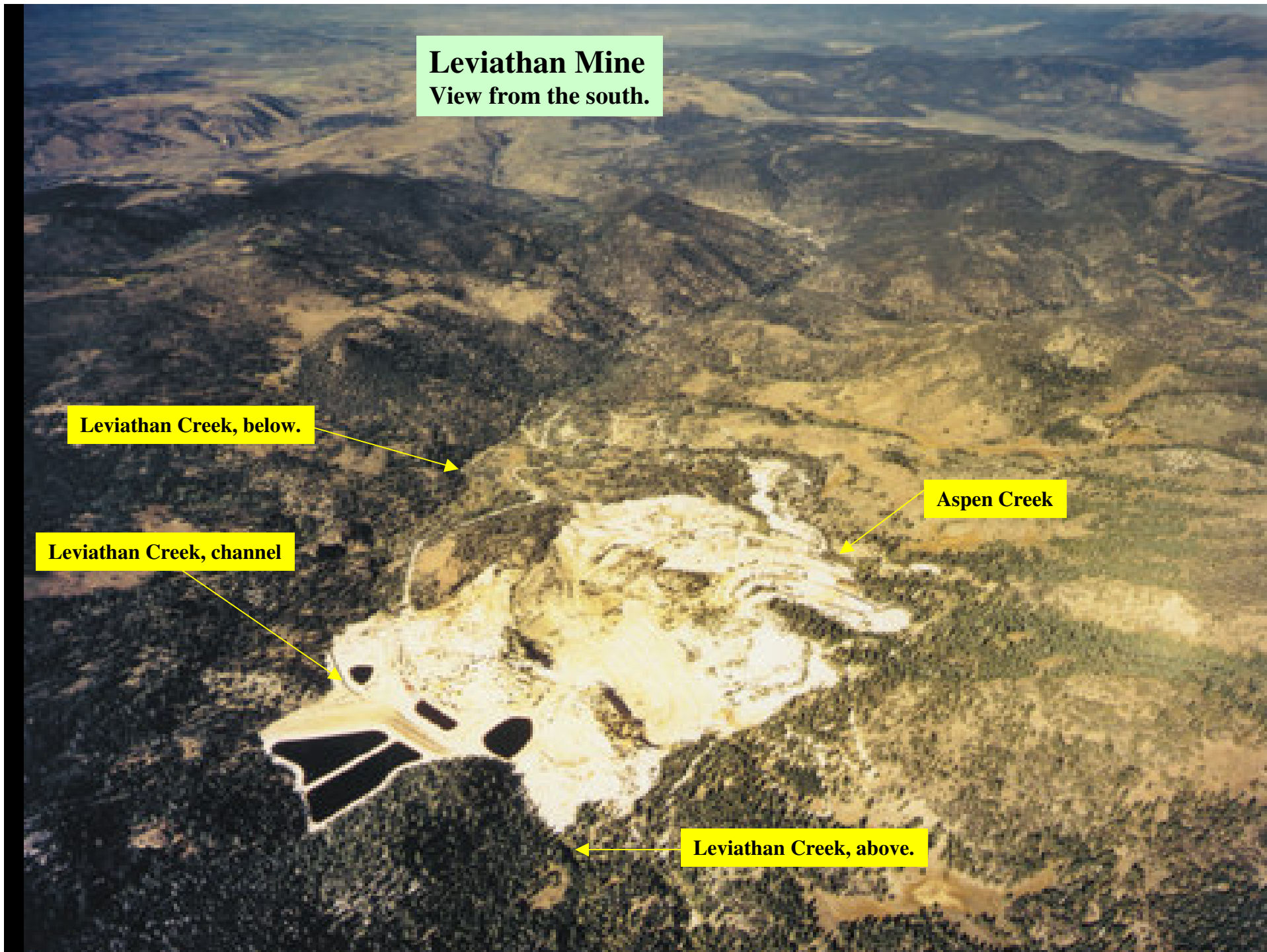
**Leviathan Mine**  
View from the south.

Leviathan Creek, below.

Aspen Creek

Leviathan Creek, channel

Leviathan Creek, above.







**Leviathan Mine, Circa 1981**

**Waste Piles**

**Leviathan Creek**

**State owns 475 acres.  
Disturbance over 231 acres.**

**Purchase Price: \$54,500**



**Waste Piles**

**Leviathan Creek**

**Prior to 1985 State Project**





### **On-going RWQCB Work:**

- 1. Pond Water Treatment**
- 2. Site Maintenance**
- 3. Site Monitoring**





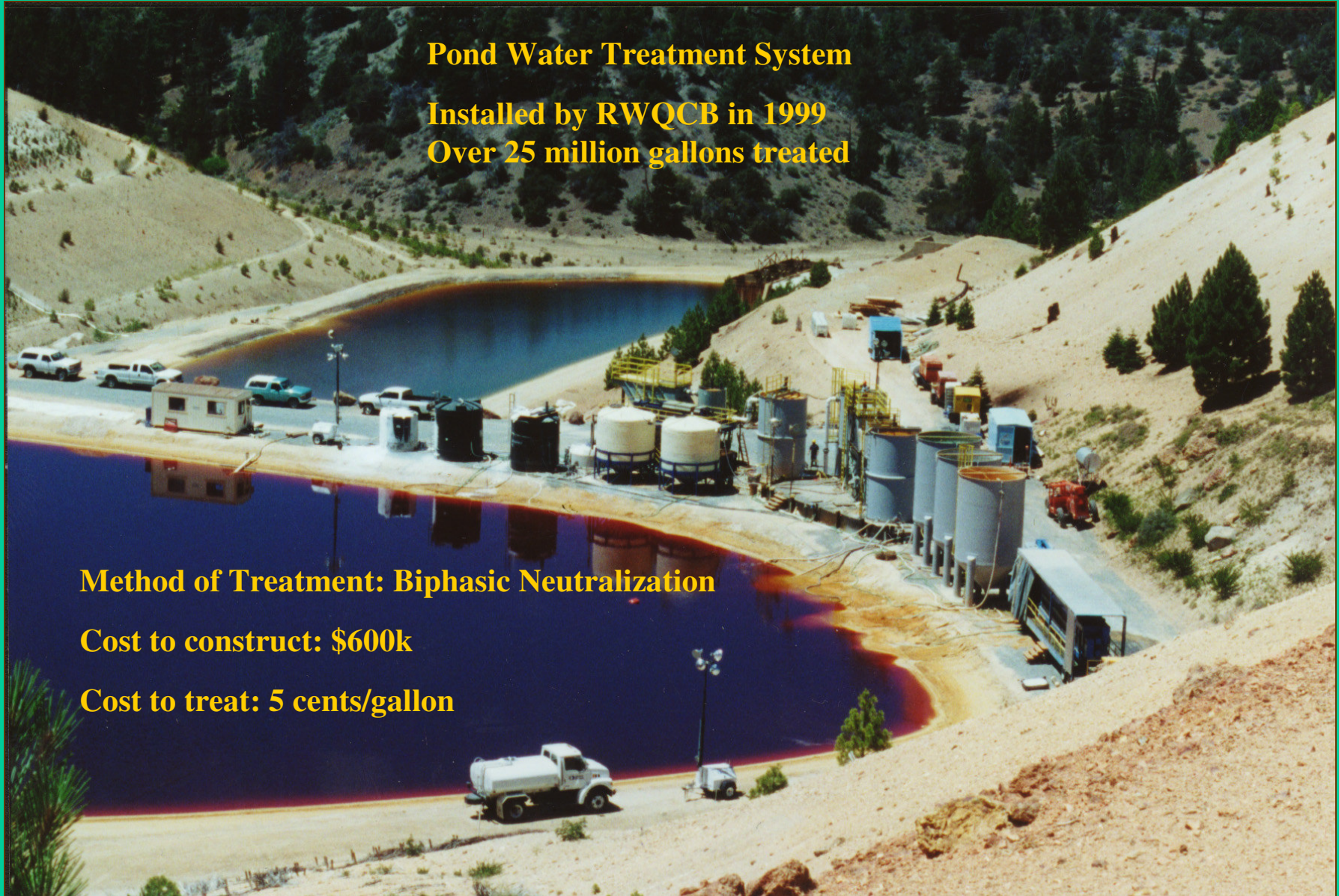
## **Pond Water Treatment System**

**Installed by RWQCB in 1999  
Over 25 million gallons treated**

**Method of Treatment: Biphasic Neutralization**

**Cost to construct: \$600k**

**Cost to treat: 5 cents/gallon**





## USEPA Criteria for Treated Effluent from RWQCB Treatment System

Water Quality	Influent AMD	Discharge Criteria	
		MAXIMUM <sub>f3</sub>	AVERAGE
pH	2.5	--	Between 6.0 – 9.0 SU <sub>f2</sub>
Arsenic <sub>f1</sub>	18.8	0.34 mg/l	0.15 mg/l <sub>f4</sub>
Aluminum <sub>f1</sub>	1,407.5	4.0 mg/l	2.0 mg/l <sub>f4</sub>
Cadmium	0.26	0.009 mg/l	0.004mg/l <sub>f4</sub>
Chromium	3.48	0.97 mg/l	0.31 mg/l <sub>f4</sub>
Copper <sub>f1</sub>	8.75	0.026 mg/l	0.016 mg/l <sub>f4</sub>
Iron <sub>f1</sub>	1,277.5	2.0 mg/l	1.0 mg/l <sub>f4</sub>
Lead	.01	0.136 mg/l	0.005 mg/l
Nickel <sub>f1</sub>	18.25	0.84 mg/l	0.094 mg/l <sub>f4</sub>
Zinc <sub>f1</sub>	5.83	0.21 mg/l	0.21 mg/l <sub>f4</sub>

f1.....Dissolved Concentration.

f2.....pH measurement based on 24-hour average discharge.

f3.....Based on a daily grab sample, field-filtered and acid-fixed promptly after collection.

f4.....Based on four daily grab samples (calculated arithmetically).





**Leviathan Creek**  
**Approx. 2 miles downstream**  
**September 1999**  
(just prior to implementation  
of pond water treatment by  
RWQCB)

**Same Location**  
**October 2001**



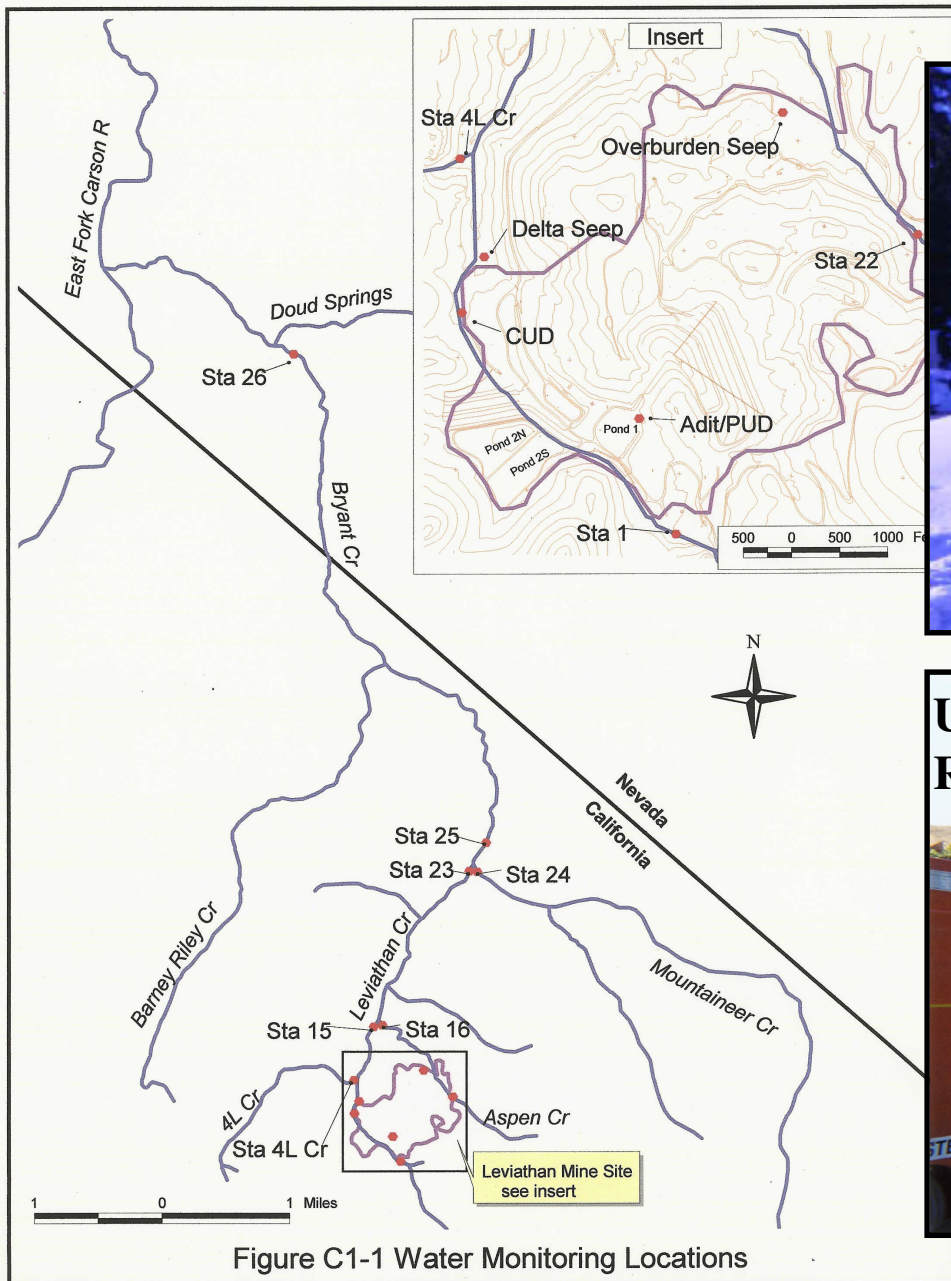


# RWQCB Site Maintenance Activities





# Site Monitoring by RWQCB





**East Fork Carson River, 1969**



**East Fork Carson River, 2001**





